

REMARKS/ARGUMENTS

Claims 1-19 are pending in the application. Claims 1, 8, and 14 have amended to emphasize that the plurality of first images of the object to be rendered from a plurality of different photographing directions and the second images that pertain to geometry information of the object to be rendered are both obtained optically and the stored. Support for these changes appears in the specification at page 11, line 19 to page 12, line 22, for example.

The outstanding Office Action once again objects to Figures 5A-C, 8A-D, 9A-E and 10A-D of the drawings, presents a rejection of Claims 8-13 under 35 U.S.C. §101, presents a rejection of Claims 1, 2, 5, 8, 9, 12, 14, 15, and 18 under 35 U.S.C. §103(a) as unpatentable over Suzuki et al. (U.S. Patent No. 6,573,912, Suzuki) in view of Dobashi et al. ("A Simple, Efficient Method for Realistic Animation of Clouds," Proc. of 27th Annual Conference on Computer Graphics and Interactive Techniques, ACM Press/Addison-Wesley Publishing Co., New York, NY, pages 19-28, Dobashi), presents a rejection of Claims 13 and 19 under 35 U.S.C. §103(a) as unpatentable over Suzuki in view of Dobashi in further view of Neugebauer (an article not properly cited on a PTO-892 or a PTO-1449), presents a rejection of Claims 3, 10, and 16 under 35 U.S.C. §103(a) as unpatentable over Suzuki in view of Dobashi in further view of Ogata et al. (U.S. Patent No. 6,313,841, Ogata), and presents a rejection of Claims 4, 6, 7, 11, and 17 under 35 U.S.C. §103(a) as unpatentable over Suzuki in view of Dobashi in further view of Gannett (U.S. Patent No. 6,118,452).

In response to the repeated objection to Figures 5A-C, 8A-D, 9A-E and 10A-D, a copy of the decision mailed February 13, 2007, that grants the petition filed October 27, 2005, to accept the color drawings. Accordingly, withdrawal of the objection is clearly in order.

Turning to the rejection of Claims 8-13 under 35 U.S.C. §101 based on the assertion that these method claims are non-statutory in not providing a “tangible result” with reference to only the step of “generating a third image by selecting texture images for respective microfacets from the plurality of first images on the basis of the plurality of photographing directions and the view direction, and by projecting the selected texture images onto the microfacets” is traversed.

Claims considered as to 35 U.S.C. §101 must be considered as a whole and a rejection based upon non-compliance with 35 U.S.C. §101 based on the assertion that just one step of the claimed method lacks a “tangible result” is clearly improper. See, e.g., *Diamond v. Diehr*, 450 U.S. 175, 188-89, 209 USPQ 1, 9 (1981) (“In determining the eligibility of respondents' claimed process for patent protection under § 101, their claims must be considered as a whole.”).

In addition, the rejection appears to be based on improperly taking statements appearing in MPEP § 2106(IV) out of context. In this regard, what this section states in the paragraph bridging pages 2100-11 and 2100-12 is that

If USPTO personnel determine that the claim does not entail the transformation of an article, then USPTO personnel shall review the claim to determine it produces a useful, tangible, and concrete result. In making this determination, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final result achieved by the claimed invention is “useful, tangible, and concrete.” {Emphasis added}

Clearly, the final result of any particular step is not the issue; instead, it is the “final result achieved by the claimed invention” that is the concern.

Here the final result of Claim 8 is generation of a “third image.” This production of a “third image” is clearly “useful,” and “tangible,” as it is a real-world result. Accordingly, withdrawal of the clearly improper rejection of Claims 8 is respectfully requested.

The rejection of Claims 1, 2, 5, 8, 9, 12, 14, 15, and 18 under 35 U.S.C. §103(a) as unpatentable over Suzuki in view of Dobashi is respectfully traversed because even if these references were to be combined for some unknown and unknowable reason, the result could not be the subject matter claimed because neither of these references teach or suggest optically obtaining “first images of an object to be rendered from a plurality of different photographing directions and second images that pertain to geometry information of the object to be rendered.”

In addition, it is noted that that Suzuki at best suggests the calculation of voxel data that is rendered locally (FIG.1) or remotely (FIGS. 2-4). To whatever extent this suggested “rendering” creates an approximation of the object surface as a geometrical shape model, this geometrical shape model is clearly for final viewing and cannot be said to be anything but an alternative to the recovery of a complete three-dimensional model as discussed at col.2, line 53-col. 3, line 21. It is this alternative embodiment that has the extraction of the “object surface, usually as a triangle mesh model,” as noted at upon col. 3, lines 1-5. Thus, it is improper to interpret this alternative model formed in an alternative embodiment as teaching the Claim 8 step of “generating a plurality of microfacets three-dimensionally in such a way to approximate a three-dimensional shape of the geometrical shape model” or the similar limitations found in independent Claims 1 and 14.

Similarly, the teachings of Suzuki at relied upon col. 3, lines 42-52 and col.10, lines 1-18 are not relevant to the Claim 8 step of “generating a third image by selecting texture images for respective microfacets from the plurality of first images on the basis of the plurality of photographing directions and view direction, and by projecting the selected texture images onto the microfacets” or corresponding limitations of independent Claims 1 and 14. The equating of microfacets to the voxel calculation is without any reasonable basis as is the apparent position that anything like texture images for respective microfacets are

taught or suggested as being selected "from the plurality of first images on the basis of the plurality of photographing directions and view direction" at either referenced location. Also, the teaching at col. 3, lines 42-52 of Suzuki relates to first having the three dimensional structure mentioned at col. 3, lines 21-22, not the view interpolations from a voxel database of col. 10, lines 1-18.

Also, it would have been a complete departure from the Suzuki teachings of working with real images of solid objects to form surface silhouettes to even attempt to substitute the section 5.2.1 Dobashi cloud teachings that relate to computer generated simulations of amorphous bodies formed by water vapor that have no fixed shape and variable densities. In this regard, the images of concern to Dobashi are animations, simulations created by a computer using graphics hardware and software, not real images as in Suzuki. The Dobashi cloud simulations are clearly completely different as to the viewing of solid objects taught by Suzuki to include viewing these real solid objects from different directions. Thus, the standard computer generating graphics API and OpenGL of concern to Dobashi and relied on as to motivation at page 7, lines 12-18 of the outstanding Action would have been of absolutely no concern to Suzuki and would not have served as motivation to modify the camera based real imaging system for solid objects of Suzuki into some kind of system for sending computer generated cloud images. Missing here is the required "logical reason apparent from positive, concrete evidence of record which justifies a combination of primary and second references," *see In re Regel*, 526 F.2d 1399, 1403 n.6, 188 USPQ 136, 139 n.6 (CCPA 1975).

In this last regard, the PTO reviewing court requires reasonable explanations as to motivation, not simply showings of parts of a claimed combination with no reasonable reasoning as to why the artisan would be led to combine such parts. *See In re Kotzab*, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000) as follows:

Most if not all inventions arise from a combination of old elements. *See In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir.1998). Thus, every element of a claimed invention may often be found in the prior art. *See id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. *See In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir.1984). Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. *See B.F. Goodrich Co. v. Aircraft Breaking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996).

Also note *In re Kahn*, 78 USPQ2d 1329, 1336 (CA FC 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”).

The outstanding Action offers only a conclusion that the artisan would want to use the Dobashi cloud teachings that relate to computer generated simulations of amorphous bodies formed by water vapor that have no fixed shape and variable densities to modify the solid object system of Suzuki without a hint of how this could even be attempted without extensive modifications to Suzuki that would destroy or completely change the purpose thereof or that would render Suzuki incapable of performing as intended. *See In re Ratti*, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959) and *In re Gordon*, 733 F.2d 900, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The reason the artisan would reasonably have been led to select these disparate references, much less how the artisan would even go about modifying these disparate references in an attempt to combine their disparate teachings has not been presented which

violates further court imposed requirements See *In re Rouffet*, 149 F. 3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the [PTO] must identify specifically the principle, known to one of ordinary skill that suggests the claimed combination. In other words, the [PTO] must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.").

Claims 2, 5, 9, 12, 15, and 18 are claims that ultimately depend from one of these independent Claims 1, 8, and 14. Accordingly, these dependent claims are believed to be allowable for the same reasons advanced above as to independent Claims 1, 8 and 14 from which they depend, as well as for their own recited features. Thus, the allowance of dependent Claims 2, 5, 9, 12, 15, and 18 is also respectfully requested.

As none of Neugebauer, Ogata, and Gannett cure the above noted deficiencies of Suzuk and Dobashi, the rejection of Claims 13 (indirectly dependent on Claim 8) and 19 (indirectly dependent on Claim 14) under 35 U.S.C. §103(a) as unpatentable over Suzuk in view of Dobashi in further view of Neugebauer, the rejection of Claims 3 (indirectly dependent on Claim 1), 10 (indirectly dependent on Claim 8), and 16 (indirectly dependent on Claim 14) under 35 U.S.C. §103(a) as unpatentable over Suzuki.in view of Dobashi in further view of Ogata, and the rejection of Claims 4 (indirectly dependent on Claim 1), 6 (indirectly dependent on Claim 1), 7 (indirectly dependent on Claim 1), 11 (indirectly dependent on Claim 8) , and 17 (indirectly dependent on Claim 14) under 35 U.S.C. §103(a) as unpatentable over Suzuki.in view of Dobashi in further view of Gannett are all traversed for the same reasons set forth above as to the independent claims. In addition, each of these dependent claims set forth further features not taught or suggested by any of these applied references and define patentably there over for this reason as well. Thus, the allowance of dependent Claims 3, 4, 6, 7, 10, 11, 13, 16, 17, and 19 is also respectfully requested.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

As no further issues are believed to remain outstanding in the present application, it is believed that this application is clearly in condition for formal allowance and an early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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